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L3 ANSWER 4 OF 8 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN
AN 1997-103574 [10] WPIDS
PI JP 08337425 A 19961224 (199710)* 4p C03B009-41 <--
TI Bottle making machine control system - includes section computers so
output operation signal, auxiliary computer, personal computer and relay
computer.
PA (KIRI-N) KIRIN TECHNOSYSTEM KK
AB JP 08337425 A UPAB: 19970307
Bottle making machine control device comprises (a) section computers
(351,352..35n) to output an operation signal to a constitution element of
individual sections (251,252..25n); (b) an auxiliary computer (4) to
monitor the operating state of the individual sections; (c) a personal
computer (5) being a computer for management to manage bottom making
process and input control information and output management information;
and (d) a relay computer (6) to relay communication between the section
computer, the auxiliary computer (4), and the personal computer (5). The
section computers, the auxiliary computer, and the relay computer have a
bus type local area network interlinking them.
ADVANTAGE - Coping with a new demand function is practicable without
modifying and updating a system.
Dwg.1/1
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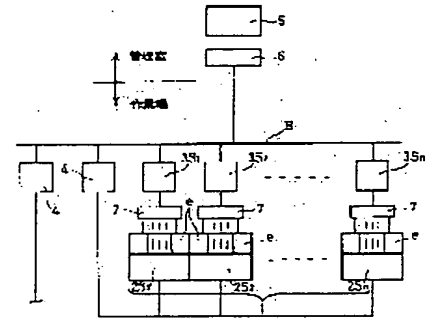
C03B 9/41

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(57) Abstract:

CONSTITUTION: This control system consists of section computers 3S1, 3S2...3Sn which output operation signals to the constituting elements of the discrete sections computers 2S1, 2S2...2Sn of the bottle making machine 1, the auxiliary computer 4 which monitors the operating conditions of the discrete sections, a personal computer 5 which is a computer for management to manage the bottle making stages, inputs a control information and outputs a management information and a junction computer 6 which is attached to the personal computer 5, maintains the control information and relays the communication among the section computers and the auxiliary computer 4 and the personal computer 5. The communication of the section computers 3S1, 3S2...3Sn, the auxiliary computer 4 and the junction computer 6 with each other is made possible by LAN of a bus type.



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CLAIMS

[Claim(s)]

[Claim 1] It is the **** machine control system which is equipped with the following, has a means by which a section computer, an auxiliary computer, and a relay computer can communicate mutually, and is characterized by the aforementioned means of communications being a bus type Local Area Network (LAN). The section computer which outputs an active signal to the component of an individual section based on the control information which it is the electronic control system of the **** machine which had independently mutually two or more individual sections which can operate, was prepared in the individual section, and was held to storage The auxiliary computer which supervises the operation situation of an individual section The personal computer which is an administrative computer which manages a **** process, inputs control information and outputs management information The relay computer which is attached to a personal computer, holds control information, and relays communication between a section computer and an auxiliary computer, and a personal computer

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Industrial Application] this invention relates to the electronic control system which was suitable for the blow machine in the blow molding of glass.

[0002]

[Description of the Prior Art] What was mutually equipped independently with two or more individual sections which can operate as a **** machine is common. A melting glass lump is supplied to the mold of each section one by one, and is fabricated by ** by the blow (blow) of the compressed air. Each section is equipped with components, such as a switchgear of mold, and a concrete supply system of **, and each component operates based on the timing data which define the program and operation tide which define operation sequence.

[0003] A control system consists of the administrative computer and the computer for section control which manage a **** process, and the computer for section control memorizes to storage the control information (a program and timing data) transmitted from the administrative computer, and outputs an active signal to each component of an applicable section based on the memorized control information.

[0004]

[Problem(s) to be Solved by the Invention] However, development of the function which supervises automatically the operation of each component of each section, the defect of **, and the temperature of mold, and carries out required control is demanded in recent years. It is desirable for the need to form the auxiliary computer of exclusive use the degree of capital apart from each section computer as a control system corresponding to the above-mentioned demand, and to cover all sections in respect of implementability, reliability, and costs. In this case, the communication with each section computer and each auxiliary computer and communication with each auxiliary computer and an administrative computer are needed. Moreover, the means for communication has a simply easy desirable thing.

[0005] this invention was made in view of the above-mentioned situation, and aims at offering the control system equipped with the means of communications which can form simply the auxiliary computer corresponding to a new demand function at every need in the control system of a **** machine.

[0006]

[Means for Solving the Problem] In order to attain the purpose mentioned above, this invention is the electronic control system of the **** machine mutually equipped independently with two or more individual sections which can operate. The section computer which outputs an active signal to the component of an individual section based on the control information which it was prepared in the individual section and held to storage, The auxiliary computer which supervises the operation situation of an individual section, and the personal computer which is an administrative computer which manages a **** process, inputs control information and outputs management information, It is attached to a personal computer, hold control information, and it consists of a relay computer which relays communication between a section computer and an auxiliary computer, and a personal computer. It has a means by which a section computer, an auxiliary computer, and a relay computer can communicate mutually, and the aforementioned means of communications is characterized by being a bus type Local Area Network (LAN).

[0007]

[Function] According to this invention, the control information inputted into the personal computer is held at the storage of a relay computer. A relay computer sends the held control information to the bus of LAN together with a section number (reception place). The section computer which discriminated the number of a

self-section receives the control information of a self-section, and tells completion. A section computer uses a reception place as a personal computer, and sends information, such as the amount of burst sizes, to a bus together with a section number. An auxiliary computer receives information, such as an active signal which used the reception place as the auxiliary computer and was sent to the bus from the section, uses a reception place as a section computer and a personal computer concerned, and sends information, such as a surveillance result, to a bus. When extending an auxiliary computer, it connects with the bus of LAN each time.

[0008]

[Example] Hereafter, one example of the **** machine control system concerning this invention is explained with reference to drawing 1. Drawing 1 is the schematic diagram showing the whole **** machine control-system composition. in drawing 1, it is a **** machine, and the **** machine 1 becomes independent mutually and that of the plurality (n pieces) which can operate is [a sign 1] individual -- section 2S1, 2S2, -- 2Sn It has. the **** machine 1 -- setting -- each -- section 2S1, 2S2, --2Sn A melting glass lump is supplied to mold one by one, the blow of the compressed air is performed, and glass ** is fabricated one by one.

[0009] The **** machine control system for controlling the aforementioned make ** machine 1 individual -- section 2S1, 2S2, --2Sn individual based on the control information which it was prepared and was held to storage -- section 2S1, 2S2, --2Sn Section computer 3S1 which outputs an active signal to Component e, 3S2, --3Sn The individual section two S1, 2S2, --2Sn The auxiliary computer 4 which supervises an operation situation, The personal computer 5 which is an administrative computer which manages a **** process, inputs control information and outputs management information, It is attached to a personal computer 5, control information is held, and they are section computer 3S1, 3S2, --3Sn. And it consists of relay computers 6 which relay communication between the auxiliary computer 4 and a personal computer 5.

[0010] The aforementioned relay computer 6, section computer 3S1, 3S2, --3Sn, and the auxiliary computer 4 form the bus type Local Area Network (LAN). moreover, individual -- section 2S1, 2S2, --2Sn the output box 7 -- minding -- section computer 3S1, 3S2, --3Sn It connects, respectively. A relay computer 6, section computer 3S1, 3S2, --3Sn, and the auxiliary computer 4 possess a LAN module, and CPU and RAM, respectively. A personal computer 5 and a relay computer 6 are installed in the management office, and other devices are installed in the work place.

[0011] Next, an operation of the **** machine control system constituted as mentioned above is explained. The control information inputted into the personal computer 5 is held at the storage of a relay computer 6. A relay computer 6 sends the held control information to the bus B of LAN together with a section number (reception place). Section computer 3S1 which discriminated the number of a self-section, 3S2, --3Sn The control information of a self-section is received, an active signal is outputted to Component e by the control information held to storage, and completion is told with the completion of an operation.

[0012] Section computer 3S1, 3S2, --3Sn A reception place is used as a personal computer 5, and information, such as the amount of burst sizes, is sent to Bus B together with a section number. The auxiliary computer 4 receives information, such as an active signal which used the reception place as the auxiliary computer 4, and was sent to the bus from the section, and is the section computer 3S1 concerned, 3S2, --3Sn about a reception place. And it is made a personal computer 5 and information, such as a surveillance result, is sent to Bus B. When it can extend if needed and extends, the auxiliary computer 4 is connected to the bus B of LAN each time, as an imaginary line shows. The extended auxiliary computer 4 can communicate mutually through an established computer and LAN.

[0013]

[Effect of the Invention] Since it can communicate to an established computer and mutual according to this invention if an auxiliary computer is added to a bus at every need and it connects as explained above, it can respond to a new demand function, without carrying out the large reconstruction and large updating of a system.

[Translation done.]

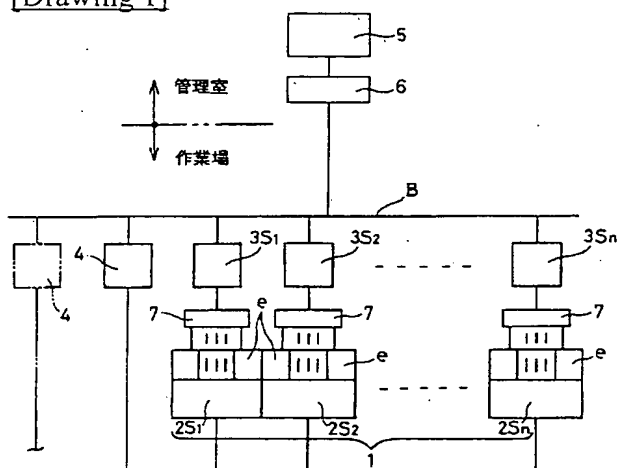
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DRAWINGS

[Drawing 1]



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